

REMARKS

Claims 1-9 and 11-20 are pending in the present application.

Claims 1 and 7 are amended herein. Claim 1 is amended to clarify the invention as claimed by the inventors. Claim 7 is amended to delete redundant recitation of compounds.

Claim 10 is canceled.

Claims 11-20 are newly entered claims. Consideration on the merits is respectfully requested.

No new matter is entered by the amendments.

The claims are allowable for the reasons set forth herein. Notice thereof is respectfully requested.

Claim Rejections - 35 USC § 112

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection has been rendered moot by amendment of claim 1. The term "characterized in that" has been replaced with the term -wherein-.

Claim 10 is rejected as being indefinite.

Claim 10 has been canceled in favor of claims 11 and 12. Claims 11 and 12 are definite and clearly set forth the invention as envisioned by the inventors.

Claim Rejections - 35 USC § 101

Claim 10 is rejected under 35 U.S.C. 101 because of the claimed recitation of use, without setting forth any steps involved in the process.

Claim 10 has been canceled in favor of claims 11 and 12 both of which are patentable with respect to 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

Claims 1-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0710675 (EP'675).

EP'675 is cited as disclosing an emulsion and solution free radical polymerization of ethylenic monomers in the presence of cyclodextrin. The process specifically sets forth the initial formation of a complex between a monomer and a macromolecular

organic compound. Initiator is then added to the solution comprising the complexed monomer.

The present invention is specific to a method of preparing monodispersed polymer particles which differs substantially from the process of EP'675. Specifically, the present invention comprises the use of a water based system comprising initiator and cyclodextrin. Monomer is then added to the solution. This process is not described in EP'675 and is, in fact, contrary to the teachings of '675. Therefore, claim 1 is patentable over EP'675 based on the recitation of elements which are novel with respect to the cited art. Claims 2-8 depend from claim 1 and are patentable for, at least, the same reasons as claim 1. Claim 10 is withdrawn in favor of claims 11 and 12 both of which ultimately depend from claim 1 and are therefore patentable for, at least, the same reasons as claim 1.

The rejection of claims 1-8 and 10 under 35 U.S.C. 102(b) as being anticipated by EP 0710675 is improper due to the failure of EP'675 to recite elements of the claimed invention. Withdrawal of the rejection is proper and respectfully requested.

Claim Rejections - 35 USC § 103

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rimmer et al. (Polymer, 40(1999), 6673-77), hereinafter Rimmer.

Rimmer describes the use of cyclodextrin in polymerization. Like EP'675 a mixture of cyclodextrin and polymer is prepared as indicated in section 2.2 on page 6674. After equilibration, presumably to form the complex described in EP'675, the initiator is added. This differs from the present invention wherein the cyclodextrin and initiator are added to a flask followed by addition of the monomer.

The teachings of Rimmer suggest that the monomer and cyclodextrin must be combined at least 30 minutes prior to addition of the monomer. This teaches in a manner contrary to the present invention wherein monomer is added to a solution comprising initiator and cyclodextrin.

The rejection of claim 1 under 35 U.S.C.103(a) as being unpatentable over Rimmer is improperly based on art which teaches away from the claimed invention. The rejection is therefore improper and removal is respectfully requested.

Claims 2-8 ultimately depend from and further limit claim 1. Claims 2-8 are therefore patentable for, at least, the same reasons as claim 1.

Removal of the rejection of claims 1-8 under 35 U.S.C.103(a) as being unpatentable over Rimmer et al. is respectfully requested.

Claims 1, 5, 6 and 7 are rejected under 35 U.S.C.103(a) as being unpatentable over Storsberg et al. (Macromol. Rapid Communications, 2000, 21, 1342-1346) hereinafter Storsberg'1.

Storsberg'1 is in alignment with the teachings of EP'675 and Rimmer. As set forth in the "Results and discussion" section (page 1343), a cyclodextrin complex of monomer (MMA or styrene) is formed followed by polymerization. Sonification and stirring reduces the time required to form a clear solution from about 30 minutes, as described in Rimmer, to a couple of minutes. Still, one of skill in the art would consider it to be futile to add monomer after addition of the cyclodextrin and initiator since it is highly unlikely that the necessary monomer/cyclodextrin complex could form prior to polymerization. This teaches in a manner contrary to the present invention

wherein monomer is added to a solution comprising initiator and cyclodextrin.

The rejection of claim 1 under 35 U.S.C.103(a) as being unpatentable over Storsberg'1 is improperly based on art which teaches away from the claimed invention. The rejection is therefore improper and removal is respectfully requested.

Claims 5-7 depend from and further limit claim 1. Claims 5-7 are therefore patentable for, at least, the same reasons as claim 1.

Removal of the rejection of claims 1 and 5-7 under 35 U.S.C. 103(a) as being unpatentable over Storsberg'1 is respectfully requested.

Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernhardt et al. (Macromolecules 2001, 34, 1647-1649), hereinafter Bernhardt.

Bernhardt provides further study of the complex formed between monomers and cyclodextrin. This study supports the teachings of EP'675, Rimmer and Storsberg'1 regarding the formation of a monomer/cyclodextrin complex from which the polymer is formed. As stated previously, the present invention

does not form a complex, at least not to any appreciable degree, since the monomer is added after addition of initiator and cyclodextrin. Bernhardt merely supports the only conclusion that can be derived from the teachings of EP'675, Rimmer and Storsberg'1.

A rejection of claims 1, 2 and 4-8 under 35 U.S.C. 103(a) as being unpatentable over Bernhardt is improperly based on teachings which lead one of ordinary skill in the art to a direction which is contrary to the claimed invention. The rejection is therefore improper and withdrawal is respectfully requested.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Storsberg et al., Macromol. Rapid Commun. 21, 236-241 (2000), hereinafter Storsberg'2.

The teachings of Storsberg'2 are consistent with EP'675, Rimmer, Storsberg'1 and Bernhardt wherein, in all of these references, a monomer/cyclodextrin complex is formed and this complex used for polymerization. This differs from, and is contrary to, the teachings of the presently claimed invention

wherein the monomer is added to a solution comprising cyclodextrin and initiator.

The rejection of claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over Storsberg'2 is improperly based on teachings which lead one of ordinary skill in the art away from the present invention. Withdrawal of the rejection is respectfully requested.

Claim 9 is rejected under 35 U.S.C. 102(a) or 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over any one of the following, each one individually: Rimmer (referred to as Ritter'1 in the action), Storsberg'1, Storsberg'2 and Bernhardt.

Each reference has been argued to teach one of ordinary skill in the art away from the present invention. This applies equally with regards to the rejection of claim 9.

Claim 9 has been rejected based on the premise that the Applicant has the burden of proof with regards to the unobvious difference. The present claimed invention describes a semi-

continuous addition of monomer to a solution comprising initiator and cyclodextrin. Semi-continuous addition is described on page 7, lines 3-11 of the specification. The examples specifically describe the differences in the claimed product. As set forth on page 23, particularly examples 9 and 10, when attempted as a batch process the polymer coagulates whereas with a semi-continuous process the polymer formed is exemplary. A coagulated polymer is typically of no value.

The rejection of claim 9 under 35 U.S.C. 102(a) or 102(b) is improper due to the failure of the cited references to teach the claimed invention. The process is different, as set forth previously, and the product is improved as demonstrated in the data set forth in the specification.

The rejection of claim 9 under 35 U.S.C. 103(a) is improper due to the fact that the reference teach opposite to the claimed process and the improvements in the product are set forth in the specification.

The rejection of claim 9 under 35 U.S.C.102(a) or 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over any one of the following, each one

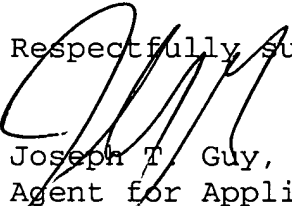
individually: Rimmer, Storsberg'1, Storsberg'2 and Bernhardt is traversed and withdrawal is respectfully requested.

CONCLUSIONS

Claims 1-9 and 10-20 are pending in the present application. All claims are in condition for allowance. Notice thereof is respectfully requested.

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Respectfully submitted,


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